Appendix D

```
' ***** LCD PANEL *****
' PIC16F819

'* SET UP BASIC ENVIRONMENT
         DEFINE CHAR_PACING 1000

' PORTA.0 = CURRENT SENSE
' PORTA.1 = POT
' PORTA.2 = THERMISTOR
' PORTA.3 = VOLTAGE SENSE
' PORTA.4 =
' PORTA.5 =

' PORTB.0 =
' PORTB.1 =
' PORTB.2 =
' PORTB.3 = NPN
' PORTB.4 = PNP
' PORTB.5 =
' PORTB.6 =
' PORTB.7 =


'************************************************************
'*                                                         *
'*                     ENVIRONMENT                         *
'*                                                         *
'************************************************************


         DEFINE CHAR_PACING 1000

'************************************************************
'*                                                         *
'*                     VARIABLES                           *
'*                                                         *
'************************************************************

N        VAR      BYTE    BANK0
X        VAR      BYTE
Y        VAR      BYTE
Z        VAR      BYTE

X2       VAR      WORD    BANK0
Y2       VAR      WORD

MISCF    VAR      BYTE    BANK0

LCNT     VAR      BYTE
VOLTS    VAR      WORD    BANK0
VOUT     VAR      WORD    BANK0
CURRENT  VAR      WORD    BANK0
AMP      VAR      WORD    BANK0
TEMP     VAR      WORD

ALOOP    VAR      BYTE
ELOOP    VAR      BYTE
PVOLT    VAR      BYTE    BANK0

BUCK     VAR      BYTE

ssave    VAR BYTE BANK0 SYSTEM
psave    VAR BYTE BANK0 SYSTEM
isr1     VAR BYTE BANK0 SYSTEM
icnt     VAR BYTE BANK0 SYSTEM
wsave    VAR BYTE $20 SYSTEM
wsave1   VAR BYTE $A0 SYSTEM


'************************************************************
'*                                                         *
'*                  START OF PROGRAM                       *
```